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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,610	05/20/2004	Amos P. Waterland	AUS920040101US1	6813
43307 7590 07/10/2008				
IBM CORP (AP) C/O AMY PATTILLO P. O. BOX 161327 AUSTIN, TX 78716				
EXAMINER				
TABOR, AMARE F				
ART UNIT		PAPER NUMBER		
2139				
MAIL DATE		DELIVERY MODE		
07/10/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/849,610

**Applicant(s)**

WATERLAND, AMOS P.

**Examiner**

AMARE TABOR

**Art Unit**

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**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

### DETAILED ACTION

1. This correspondence is in response to **Amendments** and **REMARKS** filed on April 17, 2008.
2. Claims 10-25 are cancelled; and Claim 5 is amended.
3. **Claims 1-9** are pending.

### *Response to Arguments*

4. Applicant's arguments filed on 04/17/2008 have been fully considered but they are not persuasive.

Regarding Claim 1, Applicants argued:

*"...Applicants respectfully submit that displaying a different array of the **same set of 36 different characters** in a matrix for each password entry as described in Baker does not describe 'where array of alpha-numeric characters are displayed in a visibly detectable frequency' as claimed..."*

Examiner respectfully disagrees.

The first limitation of **Claim 1** reads, "...**displaying a password prompt comprising a changing stream of random characters**, wherein a particular character within said changing stream of characters is displayed at a visibly detectable higher frequency..."

As indicated in the prior office action sent, Baker discloses [in col.2, lines 57-61, "The I/O device 1 is shown in more detail in FIG. 2. It consists of a display 5 controlled by the microprocessor and memory 2 which implements the password algorithm and **displays a random array of characters 8** consisting of six columns of six characters each"]. Thus, the system of Baker does not display 'same set of 36 different characters' as Applicant argued, but displays random array of characters in a 6\*6 matrix [or in 36 prompt positions]. Additionally, Baker discloses [in FIG.4, for example] the matrix **ROW/COLUMN** as **N** by **M**; such that, N and M are adjustable numbers. Thus, if the value of N [or ROW] is set to 1, the password prompt displaying alpha-numeric [or stream] of random characters would be a one row password display.

Furthermore, Baker discloses [see FIG.4, for example] a password algorithm of generating and displaying alpha-numeric characters [steps 22 and 23], and then the user selects a column and row; i.e., character position [step 24] by visually following the randomly changing alpha-numeric [or stream] characters.

Additionally Applicants argued:

*"...a difference between Baker and Hoover and claim 1 is that Baker describes a user selecting a row or column in which a character of a password is displayed and Hoover describes a user using keystrokes or a mouse selection to select one of multiple displayed fields containing a character or to increment or decrement a digit displayed in a field, therefore, clearly neither Baker nor Hoover separately or in combination describe a user providing inputs that would adjust the particular character displayed at a higher frequency within a random stream of characters..."*

Examiner respectfully disagrees.

First, Examiner could not understand Applicant's argument clearly, because Hoover is applied to claim 1 to address the claimed limitation "*receiving input to increment or decrement said particular character to reach a password character of a password*". As best understood from Applicant's argument, Applicant agrees Hoover teaches the limitation, but argues that combination of Baker and Hoover not teaching claim 1 as a whole.

Second, as Applicant admitted, Hoover teaches [in col.2, lines 47-51, "*For example, for a six-digit PIN, the system starts by displaying six random digits. To select his PIN, the user cursors through the digits. At each digit, he hits the up or down arrow key (to increment the digit by +1 or -1) an appropriate number of times until the desired digit appears*"]. In other words, Hoover discloses incrementing or decrementing a digit [or password character] to reach at the desired password digit [or to reach a password character of a password, as claimed]. One of ordinary skill in the art recognizes that the method of Hoover could be applied to alpha-numeric characters.

Finally, Applicants argued:

*"...because a proper Graham factual findings indicate differences between Goal and Hyponnen and claim 1 and no clear articulation of the reasons why the claimed invention of claim 1 would have been is provided, the Office erred in finding prima facie obviousness as to claim 1..."*

Examiner respectfully disagrees.

**First**, Examiner is not sure of the phrase "...differences between Goal and Hyponnen and claim 1..." Examiner interprets the phrase as "differences between Baker and Hoover and claim 1..."

**Second**, Examiner understands Applicant's argument as saying 'there is no suggestion to combine Baker and Hoover'. Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both Baker and Hoover are directed to password entry systems; and, in addition, the prior arts disclose system of protecting the password entry system [see abstract of Baker and col.1 of Hoover].

Therefore, since Applicant's argument is not found persuasive, the last rejection sent is repeated; and this action is made Final.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over “Baker” (US 5,428,349) in view of “Hoover” (US 6,209,102 B1).**

As per **Claim 1**, Baker teaches,

A computer-implemented method for secure password entry (see Fig.2-4; and abstract), comprising: displaying a password prompt comprising a changing stream of random characters (see 8 in Fig.2 & 3; where a stream of random characters is displayed), wherein a particular character within said changing stream of random characters is displayed at a visibly detectable higher frequency (see Steps **22 & 23** in Fig.4; where array of alpha-numeric characters are displayed in a visibly detectable frequency).

Baker fails to teach explicitly receiving input to increment or decrement said particular character to reach a password character of a password. However, in the same filed of endeavor, Hoover teaches receiving input to increment or decrement said particular character to reach a password character of a password (see Fig.1 & 2; and for example, col. 2, line 36-63).

It would have been of obvious to a person having ordinary skill in the art at the time of Applicant's invention to combine the teachings of Hoover and Baker because both inventions are directed to method of password entry system. Incorporating the input increment and decrement feature of Hoover modifies the password entry system of Baker, so that a mechanism to prevent an attacker from downloading keystrokes or character positions when an authorized user enters password to gain an access to a secured system is implemented (see of Background **Hoover**).

As per **Claims 2 and 3**, Baker-Hoover combination teaches,

displaying a plurality of character positions, wherein a stream of random characters is displayed in each of said plurality of character positions (see Fig.2-3; where plurality of character positions of positions are displayed; and for example, col.2, line 57 to col.3, line 12 of **Baker**), wherein a particular position from among said plurality of character positions provides said password prompt (see Step **24** of Fig.4; where user selects a particular position; and for example, col.3, lines 12-44 of **Baker**); and

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adjusting a number of said plurality of character positions (see Step 23; where the **N** and/or **M** in **ROW/COLUMN** can be adjusted; and for example, col.3, line 57 to col.4, line 28 of **Baker**).

As per Claim 5, Baker-Hoover combination teaches,

responsive to receiving input of a character selection input for selecting said particular character, selecting said particular character as said password character from among a plurality of separately selectable password characters of said password (see Step 24 of **Baker**; where user selects a password character from the matrix array); and

responsive to receiving input of a password completion character indicating that said password is complete, securely passing each separately selected password character of said password to a requesting software layer (see Steps 27-31 of **Baker**; where last element of the password is entered and access is either permitted or denied ).

As per Claims 6 and 7, Baker-Hoover combination teaches,

responsive to receiving a request for a password from a software layer within a data processing system, invoking a password entry controller (see **MICROPROCESSOR CONTROLLER** or **PASSWORD ALGORITHM** in Figs.1, 5 and 6 of **Baker**) from within said data processing system, wherein said password entry controller controls said displaying said password prompt (see for example, col.2, line 44 to col. 3, line 8; and col.4, lines 30-56 of **Baker**); and

responsive to receiving, at a client system (see **REMOTE TERMINAL** in Fig.5 of **Baker**), a request for a password entry from a server system (see **MAIN COMPUTER 45** in Fig.5 of **Baker**) from which said client system is attempting to access a resource, invoking a password entry controller from within said data processing system, wherein said password entry controller controls said displaying said password prompt (see for example, col.4, lines 30-44 of **Baker**).

**Hoover** teaches a receiving input to increment or decrement said particular character (see Fig. 1 & 2; and for example, col. 2, line 36-63).

As per Claims 8 and 9 Baker teaches, generating and displaying said stream of random characters, wherein said particular character is randomly selected (see abstract and Fig.2-3 and Step 23; where array of random characters are displayed; and for example, col.1, line 55 to col.2, line 10 of **Baker**).

Baker fails to teach explicitly adjusting a frequency percentage at which said particular character is displayed; however, Baker teaches displaying randomized alpha-numeric matrix array of characters at constant frequency (see abstract and Fig.2-3 and Step 23).

It would have been of obvious to a person having ordinary skill in the art at the time of Applicant's invention to modify the system of Baker to display characters in an adjusted frequency percentage in order to enhance the password entry display unit, which would further discourage and confuse an attacker while eavesdropping.

### *Conclusion*

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMARE TABOR whose telephone number is (571)270-3155. The examiner can normally be reached on Mon-Fri 8:00a.m. to 5:00p.m., EST.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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